The experiences of colour and light are interdependent and cannot be analysed separately. The colours of the environment influence our experiences of light and the need for lighting – and vice versa: the intensity, quality and distribution of light are essential for our perception and experience of colour. A profound understanding of the interaction between colour, light and human beings calls for an interdisciplinary approach, which up to now has been rather rare. As a result researchers and practitioners have often had difficulty in understanding and relating to one another's methods and results, although they work with similar questions. One important aspect of this is the absence of common and generally accepted concepts.

These were the starting points for the interdisciplinary research project SYN-TES: Human colour and light synthesis – towards a coherent field of knowledge, carried out in Konstfack – University College of Arts, Crafts and Design – in Stockholm during 2010–11.

The texts in this book were written within an epistemological subproject of SYN-TES. They present different scientific approaches in a broader epistemological perspective, clarify conflicting use of concepts and suggest possible ways of improving inter-disciplinary understanding. In his introduction to the book, C.L. Hardin takes look at the problem of bridging the gap between conscious experience and scientific data, with particular regard to the variability of human colour experience. Ulf Klarén, in Natural Experience and physical Abstractions, discusses different epistemological theories concerning perception, their evolution and their implications for our understanding of colour and light. In Seeing and Perceiving Harald Arnkil takes a closer look at these seemingly simple concepts, providing a starting point for discussing our visual experience of the world. Light and Colour: Concepts and their use by Karin Fridell Anter provides an overview of different approaches that have led to diverging uses of terminology and concepts within this field. Some of the most problematic terms and concepts are further discussed by Harald Arnkil in Lightness and Brightness and Other Confusions.

C.L. Hardin is Professor of Philosophy Emeritus at Syracuse University, USA. He takes colour to be a test case for theories about how the qualities of everyday experience manage to find a place in a quantitative universe consisting of matter and energy. He is the author of Color for Philosophers: Unweaving the Rainbow which received the Johnsonian Prize in Philosophy in 1986 and has since been published in an extended new edition. He is also the co-editor of Color Categories in Thought and Language (1997).

Harald Arnkil is an artist, educator and colour researcher. Arnkil is Lecturer in Colour Studies at the Aalto University School of Arts, Design and Architecture. Besides teaching, he is presently pursuing doctoral studies and research in the field of colour. Arnkil’s book Colour in the Visual World – a handbook for artists, designers and architects (originally published in 2007 in Finnish as Värit havaintojen maailmassa) is due to appear in October 2012.

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Ulf Klarén is a researcher, writer and lecturer on perception, colour and light. Until his retirement in 2011, he was Associate Professor and head of the Perception Studio at Konstfack – University College of Arts, Crafts and Design. Ulf Klarén’s publications include a textbook on colour, several scientific reports and contributions to anthologies as well as articles on art education. During 2010-11 he was assistant project leader of SYN-TES.